November 25, 2020

Mr. John Lee Chairman, Zoning Board of Appeals Walpole Town Hall 135 School Street Walpole, MA 02081

Subject: Diamond Hill Estates, Dupee Street
Response to Tetra Tech Traffic Review

Dear Mr. Lee

As part of the application for the Diamond Hill Estates 40B project and on behalf of the Applicant, Green International Affiliates, Inc. (Green) provided a limited traffic assessment summary in accordance with the current regulations and practices of the Board of Appeals for small residential projects (i.e. under 20 units). The initial memorandum was completed on February 3, 2019 and was updated (dated June 2, 2020) to reflect the site design changes such as the hammerhead turnaround design. We have reviewed the peer review comments provided by Tetra Tech in an October 19, 2020 letter. In relation to traffic items noted in the review letter, there was concurrence by Tetra that the proposed project will generate relatively low new traffic, and that the traffic assessment was carried out appropriately. However, there were a set of comments provided by Tetra Tech that require some response on behalf of the Applicant and these are summarized in the following paragraphs.

For the most part, the traffic related comments (#42 to #48) were either commentary or related to items that may have been addressed in previous documents. However, to be complete, each of these comments has been reviewed and response prepared.

<u>Comment 42</u> – The project accurately forecasts the relatively minor increases in new traffic and the project traffic is not expected to significantly impact operations at the nearby intersections.

**Response**: We concur with this finding and no further response is required.

<u>Comment 43</u> – the required sight distances were calculated based on posted speed of 35 mph. Based on conditions observed during our site visit, it appears that actual traffic speeds may be significantly higher. We recommend that application document the 85<sup>th</sup> percentile speed and confirm adequate sight distances.

**Response**: While factual basis for the comment was not provided with the comment: "it *appears* that actual traffic speeds may be significantly higher", traffic speed data was collected on High Plains Street in the vicinity of Dupee Street. Initially, small sample speed data was obtained for the eastbound direction of traffic approaching Dupee Street near Victoria Street with the use of a radar gun. Data was collected between 12:30PM and 12:45PM on October 23, 2020 with data points reflecting generally every other car approaching the street. These data showed that the average speed approaching Dupee Street from the west at this location was 33 miles per hour on average with the 85<sup>th</sup> percentile speed of 36 miles per hour indicating good compliance with the posted speeds.

As a follow up, two full days of data was collected from November 18 to 19 using an automatic traffic recorder with the placement between Victoria Street and Dupee Street. These data showed that average

speed between 35 and 36 mph with the 85<sup>th</sup> percentile speed between 39 and 40 mph. More than 80% of the traffic in this location is traveling between 32 and 40 mph with nearly 85% at or below 39 mph. The posted speed is 35 mph and the observations indicate generally reasonable compliance with the posted speed limit. Traffic signals short distances east and west of Dupee Street, in addition to creating gaps for side street traffic to enter and exit, also tend to contribute to keeping travel speeds somewhat down with the vehicle slowing and stopping as well as the startup queues from the signals.

That said, actual field measurements of available sight distances and our previous analysis have shown that sight distances that currently exist will meet the criteria for approximately 45 mph to the west and more than 50 mph to the east that in our opinion, are not typical speeds for that section and **exceed** the noted 85<sup>th</sup> percentile speed criteria.

<u>Comment 44</u> – sight distance triangles should be shown on the approved plans.

**Response**: As indicated in the previously submitted documents, the analysis of sight distances showed that 350 feet exists to the west while more than 800 feet exists to the east and drawings illustrated those findings. In response to this comment and request, sight line triangles that illustrate the areas within the right of way to maintain clear visibility were developed for the 85<sup>th</sup> percentile speed of 40 mph, which would require 305 feet of sight distance in both directions be satisfied. This plan showing these sight line triangles areas are attached as well as been provided to the site design engineer for inclusion in the approved plans.

<u>Comment 45</u> - ...proposed accommodations for fire truck turnaround are less than ideal and likely prone to be blocked by visiting/resident vehicles or plowed snow. We recommend a cul de sac turnaround ...

**Response**: The current plans provide an acceptable method for fire truck turnaround.

<u>Comment 46</u> – fire truck turning movements should be shown on the site plans to confirm movements incorporate the most current design ...

**Response**: Fire truck movements based on the Walpole vehicle were evaluated and illustrated using the AutoTurn software, based on the latest site design plans that were made available and included in the June 2020 supplemental material. The evaluation illustrated that fire apparatus can enter/exit Dupee Street and can utilize the internal hammerhead turnaround.

<u>Comment 47</u> – Pedestrian volumes are expected to be low and the dead end configuration suggests that vehicles using Dupee Street will either be residents or those known to residents decreasing the likelihood of irresponsible vehicle speeds or operation. ... It would be difficult to provide room for a sidewalk on either side of the road.

**Response**: We concur and no further response is required.

<u>Comment 48</u> – And plans for widening Dupee Street at its intersection with High Plain Street must maintain pedestrian movement along High Plan Street.

**Response**: We concur and recognized this in our set of recommendations as well. The Dupee Street intersection with High Plain Street will be improved with corner radii that can be accommodated within the public right of way. One utility pole will need to be relocated, new ADA compliant ramps at the sidewalk and some general clearing within the sight line triangles within public rights of way. A crosswalk will be installed across Dupee Street as requested by the Chief.

We believe this supplemental information with the attachments in combination with the previous memoranda have fully addressed the traffic questions and comments in relation to this proposed project.

Very truly yours,

GREEN INTERNATIONAL AFFILIATES, INC.

William J Scully

William J. Scully, P.E. Vice President

WJS/-

Attachments

Cc L. Petrozzi



High Plain Street (Route 27) west of Dupee Street City, State: Walpole, MA

Client: GIA/ C. Tobias

Site Code: Task Order #1

PRECISION D A T A INDUSTRIES, LLC

PDI File #: 207709 ATR-A

46 Morton Street, Framingham, MA 01702 Office: 508-875-0100 Fax: 508-875-0118 Email: datarequests@pdillc.com Count Date: Wednesday, November 18, 2020

## Volume

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High Plain Street (Route 27)
west of Dupee Street
ity State: Walnele MA

City, State: Walpole, MA
Client: GIA/ C. Tobias
Site Code: Task Order #1



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## Volume

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Speed (60-minute)

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2:00 AM	0	0	0	0	0	4	2	2	0	0	0	0	0	8	44.9	40.0
3:00 AM	0	0	0	0	2	2	3	3	0	0	0	0	0	10	47.7	41.4
4:00 AM	0	0	0	2	4	21	15	8	3	0	0	0	0	53	45.2	40.0
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2:00 PM	0	0	2	10	216	285	38	10	0	0	0	0	0	561	38.0	35.3
3:00 PM	0	0	0	8	215	298	65	6	0	0	0	0	0	592	39.0	35.7
4:00 PM	1	2	1	26	210	236	43	3	0	0	0	0	0	522	38.0	34.8
5:00 PM	0	2	5	22	192	246	32	4	0	0	0	0	0	503	38.0	34.9
6:00 PM	0	0	1	13	117	192	40	1	0	0	0	0	0	364	39.0	35.6
7:00 PM	0	0	0	4	62	127	34	4	0	0	0	0	0	231	40.0	36.3
8:00 PM	0	0	0	4	34	88	33	2	0	0	0	0	0	161	41.0	36.8
9:00 PM	0	0	1	5	14	43	29	0	1	0	0	0	0	93	41.0	37.0
10:00 PM	0	0	0	3	11	30	16	4	1	0	0	0	0	65	42.0	38.0
11:00 PM	0	0	0	1	7	17	11	4	1	0	0	0	0	41	44.0	38.7
Total	3	6	18	265	2211	3313	891	114	12	2	0	0	0	6835	39.0	35.8
Percent	0.04%	0.09%	0.26%	3.88%	32.35%	48.47%	13.04%	1.67%	0.18%	0.03%	0.00%	0.00%	0.00%			
AM Peak	9:00 AM	6:00 AM	5:00 AM	11:00 AM	8:00 AM	11:00 AM	6:00 AM	5:00 AM	4:00 AM	12:00 AM				8:00 AM		
Volume	2	1	1	26	162	249	78	15	3	1	0	0	0	484		
PM Peak	4:00 PM	4:00 PM	5:00 PM	1:00 PM	2:00 PM	3:00 PM	3:00 PM	2:00 PM	9:00 PM	12:00 PM				3:00 PM		
Volume	1	2	5	32	216	298	65	10	1	1	0	0	0	592		
	15th Perce	entile:	32.0	MPH		Average S	peed:	35.8	MPH		Posted Sp	eed Limit:		35	MPH	
	50th Percentile: 36.0 MPH							31 to 40 MPH			•	of Vehicles	·	3555		
85th Percentile: 36.0 MPH					10 MPH Pace: 3  Number in Pace:			1411 11				> 35 MPH:		52.0%		
95th Percentile: 42.0 MPH					Percent in	Pace:	83.5%									

95th Percentile:

42.0 MPH

Percent in Pace:



PDI File #: 207709 ATR-A

Count Date Wednesday, November 18, 2020

46 Morton Street, Framingham, MA 01702 Office: 508-875-0100 Fax: 508-875-0118 Email: datarequests@pdillc.com

Speed (60-minute)

							Speeu	WB	utej							
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	3	7	1	0	0	0	0	0	0	12	38.0	35.7
1:00 AM	0	0	0	0	4	3	5	1	0	0	0	0	0	13	43.0	38.6
2:00 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	6	38.0	37.3
3:00 AM	0	0	0	2	3	6	3	0	0	1	0	0	0	15	40.9	36.3
4:00 AM	0	0	0	0	2	12	12	1	0	1	0	0	0	28	43.0	39.6
5:00 AM	1	0	0	1	26	54	19	4	1	0	0	0	0	106	41.0	37.0
6:00 AM	0	0	0	1	32	143	73	11	1	0	0	0	1	262	42.0	38.4
7:00 AM	0	0	1	5	99	214	68	7	0	0	0	0	0	394	40.0	36.5
8:00 AM	0	0	1	3	115	210	60	6	1	0	0	0	1	397	40.0	36.5
9:00 AM	0	1	4	17	103	187	43	6	0	0	0	0	0	361	39.0	35.5
10:00 AM	0	0	2	14	101	205	44	2	0	0	0	0	0	368	39.0	35.8
11:00 AM	1	0	0	7	107	204	63	2	1	0	0	0	1	386	40.0	36.4
12:00 PM	0	2	3	4	89	207	56	6	0	1	0	0	3	371	40.0	36.7
1:00 PM	0	1	1	22	125	178	58	3	1	0	0	0	1	390	40.0	35.8
2:00 PM	0	5	2	26	121	199	66	6	0	0	0	0	0	425	40.0	35.5
3:00 PM	0	0	5	10	134	197	45	5	0	1	0	0	0	397	39.0	35.7
4:00 PM	1	0	2	34	149	215	40	5	2	0	0	0	0	448	39.0	35.1
5:00 PM	2	3	2	34	180	171	36	2	0	0	0	0	0	430	38.0	34.3
6:00 PM	1	0	1	17	135	165	38	2	0	0	0	0	0	359	39.0	35.3
7:00 PM	0	0	1	4	55	143	47	4	1	0	0	0	0	255	41.0	36.9
8:00 PM	0	0	0	4	55	100	28	2	0	0	0	0	0	189	40.0	36.2
9:00 PM	0	0	0	2	22	48	31	3	1	0	0	0	2	109	42.0	38.4
10:00 PM	0	0	1	0	21	33	16	7	1	0	0	0	0	79	42.3	37.6
11:00 PM	0	0	0	1	13	12	12	1	1	0	0	0	0	40	42.0	37.5
Total	6	12	26	209	1694	2919	864	86	11	4	0	0	9	5840	40.0	36.1
Percent	0.10%	0.21%	0.45%	3.58%	29.01%	49.98%	14.79%	1.47%	0.19%	0.07%	0.00%	0.00%	0.15%			
AM Peak	5:00 AM	9:00 AM	9:00 AM	9:00 AM	8:00 AM	7:00 AM	6:00 AM	6:00 AM	5:00 AM	3:00 AM			6:00 AM	8:00 AM		
Volume	1	1	4	17	115	214	73	11	1	1	0	0	1	397		
70.0	_	_	·		110				-	_	· ·	· ·	_	00.		
PM Peak	5:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	4:00 PM	2:00 PM	10:00 PM	4:00 PM	12:00 PM			12:00 PM	4:00 PM		
Volume	2	5	5	34	180	215	66	7	2	1	0	0	3	448		
	15th Percentile: 32.0 MPH Av			Average S	peed:	36.1	MPH		Posted Sp	eed Limit:		35	MPH			
	50th Percentile: 32.0 MPH			- '				to 41 MPH Number of Vehicles > 35 MPH								
	85th Percentile: 40.0 MPH			MPH		Number ir	n Pace:	4895			Percent of Vehicles > 35 MPH: 56.8%					

83.8%

95th Percentile:

42.0 MPH

Percent in Pace:



PDI File #: 207709 ATR-A

Count Date Wednesday, November 18, 2020

46 Morton Street, Framingham, MA 01702 Office: 508-875-0100 Fax: 508-875-0118 Email: datarequests@pdillc.com

Speed (60-minute)

						(		ed EB ar								
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	2	5	12	7	2	1	1	0	0	0	30	41.0	38.2
1:00 AM	0	0	0	1	6	7	6	1	0	0	0	0	0	21	42.0	37.2
2:00 AM	0	0	0	0	0	10	2	2	0	0	0	0	0	14	42.2	38.9
3:00 AM	0	0	0	2	5	8	6	3	0	1	0	0	0	25	45.2	38.3
4:00 AM	0	0	0	2	6	33	27	9	3	1	0	0	0	81	45.0	39.8
5:00 AM	1	0	1	1	41	111	62	19	1	0	0	0	0	237	43.0	38.1
6:00 AM	0	1	0	6	92	259	151	25	4	0	0	0	1	539	42.0	38.0
7:00 AM	0	0	1	27	257	406	124	11	0	0	0	0	0	826	40.0	36.0
8:00 AM	0	0	1	22	277	444	124	10	2	0	0	0	1	881	40.0	36.0
9:00 AM	2	1	4	35	238	389	91	10	0	0	0	0	0	770	39.0	35.5
10:00 AM	0	0	3	28	232	405	101	9	0	0	0	0	0	778	39.0	35.9
11:00 AM	1	1	0	33	248	453	119	5	2	0	0	0	1	863	39.0	36.0
12:00 PM	0	2	6	33	286	449	117	11	0	2	0	0	3	909	39.0	35.8
1:00 PM	0	1	4	54	249	401	118	8	1	0	0	0	1	837	40.0	35.7
2:00 PM	0	5	4	36	337	484	104	16	0	0	0	0	0	986	39.0	35.4
3:00 PM	0	0	5	18	349	495	110	11	0	1	0	0	0	989	39.0	35.7
4:00 PM	2	2	3	60	359	451	83	8	2	0	0	0	0	970	38.0	34.9
5:00 PM	2	5	7	56	372	417	68	6	0	0	0	0	0	933	38.0	34.6
6:00 PM	1	0	2	30	252	357	78	3	0	0	0	0	0	723	39.0	35.4
7:00 PM	0	0	1	8	117	270	81	8	1	0	0	0	0	486	40.0	36.6
8:00 PM	0	0	0	8	89	188	61	4	0	0	0	0	0	350	40.0	36.5
9:00 PM	0	0	1	7	36	91	60	3	2	0	0	0	2	202	41.0	37.8
10:00 PM	0	0	1	3	32	63	32	11	2	0	0	0	0	144	42.0	37.8
11:00 PM	0	0	0	2	20	29	23	5	2	0	0	0	0	81	43.0	38.1
Total	9	18	44	474	3905	6232	1755	200	23	6	0	0	9	12675	40.0	35.9
Percent	0.07%	0.14%	0.35%	3.74%	30.81%	49.17%	13.85%	1.58%	0.18%	0.05%	0.00%	0.00%	0.07%			
AM Peak	9:00 AM	6:00 AM	9:00 AM	9:00 AM	8:00 AM	11:00 AM	6:00 AM	6:00 AM	6:00 AM	12:00 AM			6:00 AM	8:00 AM		
Volume	2	1	4	35	277	453	151	25	4	1	0	0	1	881		
PM Peak	4:00 PM	2:00 PM	5:00 PM	4:00 PM	5:00 PM	3:00 PM	1:00 PM	2:00 PM	4:00 PM	12:00 PM			12:00 PM	3:00 PM		
Volume	2	5	7	60	372	495	118	16	2	2	0	0	3	989		
	15th Percentile: 32.0 MPH				Average S	peed:	35.9 MPH			Posted Sp	eed Limit:		35	35 MPH		
	50th Percentile: 36.0 MPH				<b>.</b>			32 to 41 MPH			Number of Vehicles > 35 MPH:					
;	85th Percentile: 40.0 MPH			Number i	10523 Percent of Vehicles > 35 MPH				54.2%							

83.0%



PDI File #: 207709 ATR-A

Count Date Thursday, November 19, 2020

46 Morton Street, Framingham, MA 01702 Office: 508-875-0100 Fax: 508-875-0118 Email: datarequests@pdillc.com

Speed (60-minute)

	Speed (60-minute)  EB															
								EB								
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	1	4	3	1	0	0	0	0	0	9	42.8	38.6
1:00 AM	0	0	0	0	1	1	1	1	0	0	0	0	0	4	44.7	40.0
2:00 AM	0	0	1	0	2	1	1	3	0	0	0	0	0	8	45.0	37.8
3:00 AM	0	0	0	0	4	3	5	1	1	0	0	0	0	14	44.1	39.6
4:00 AM	0	0	0	1	4	11	17	9	2	0	0	0	0	44	46.0	40.9
5:00 AM	0	0	0	1	11	66	48	9	2	1	0	0	0	138	43.0	39.3
6:00 AM	0	1	0	4	47	136	73	6	2	0	0	0	0	269	41.0	37.6
7:00 AM	0	0	0	30	173	222	58	10	0	0	0	0	0	493	39.0	35.4
8:00 AM	0	0	2	24	128	276	54	3	0	0	0	0	0	487	39.0	35.8
9:00 AM	1	0	2	28	120	198	56	3	0	0	0	0	0	408	39.0	35.5
10:00 AM	0	0	3	23	104	230	45	3	0	0	0	0	0	408	39.0	35.6
11:00 AM	0	0	1	11	167	225	53	2	1	0	0	0	0	460	39.0	35.6
12:00 PM	0	0	1	26	156	218	62	5	0	0	0	0	0	468	39.0	35.4
1:00 PM	0	1	9	21	155	196	37	7	1	0	0	0	0	427	38.0	35.0
2:00 PM	0	0	5	35	240	248	49	1	0	0	0	0	0	578	38.0	34.7
3:00 PM	0	0	3	28	238	299	64	5	0	0	0	1	0	638	39.0	35.3
4:00 PM	0	2	3	39	258	239	32	2	0	0	0	0	0	575	38.0	34.2
5:00 PM	0	0	0	45	254	225	30	6	1	0	0	0	0	561	38.0	34.3
6:00 PM	0	0	0	9	101	179	54	2	0	0	0	0	0	345	40.0	36.2
7:00 PM	0	0	1	10	72	123	49	5	1	0	0	0	0	261	41.0	36.4
8:00 PM	0	0	0	6	43	113	41	3	0	0	0	0	0	206	40.0	36.9
9:00 PM	0	0	0	1	30	44	22	3	1	0	0	0	0	101	42.0	37.0
10:00 PM	0	0	1	2	17	35	14	1	1	0	0	0	0	71	40.0	36.6
11:00 PM	0	0	0	0	6	18	16	1	1	1	0	0	0	43	42.7	38.8
Total	1	4	32	344	2332	3310	884	92	14	2	0	1	0	7016	39.0	35.6
Percent	0.01%	0.06%	0.46%	4.90%	33.24%	47.18%	12.60%	1.31%	0.20%	0.03%	0.00%	0.01%	0.00%			
AM Peak	9:00 AM	6:00 AM	10:00 AM	7:00 AM	7:00 AM	8:00 AM	6:00 AM	7:00 AM	4:00 AM	5:00 AM				7:00 AM		
Volume	1	1	3	30	173	276	73	10	2	1	0	0	0	493		
PM Peak		4:00 PM	1:00 PM	5:00 PM	4:00 PM	3:00 PM	3:00 PM	1:00 PM	1:00 PM	11:00 PM		3:00 PM		3:00 PM		
Volume	0	2	9	45	258	299	64	7	1	1	0	1	0	638		
	15th Percentile: 32.0 MPH					Average Speed:		35.6 MPH			Posted Sp	eed Limit:	35 MPH			
	50th Percentile: 36.0 MPH							31 to 40 MPH			Number o	f Vehicles				
85th Percentile: 36.0 MPH					Number in		5760					> 35 MPH:		50.3%		
95th Percentile: 42.0 MPH					Percent in Pace: 82.1%											



PDI File #: 207709 ATR-A

Count Date Thursday, November 19, 2020

46 Morton Street, Framingham, MA 01702 Office: 508-875-0100 Fax: 508-875-0118 Email: datarequests@pdillc.com

Speed (60-minute)

							Speed	(60-min	utej								
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed	
12:00 AM	0	0	0	0	4	7	4	0	0	0	0	0	0	15	41.8	37.2	
1:00 AM	0	0	0	0	2	6	3	1	0	0	0	0	0	12	42.7	38.3	
2:00 AM	0	0	0	1	0	5	2	0	0	0	0	0	0	8	40.0	36.9	
3:00 AM	0	0	0	0	3	5	1	1	0	0	0	0	0	10	40.0	37.3	
4:00 AM	0	0	0	0	0	12	11	1	2	0	0	0	0	26	42.5	40.6	
5:00 AM	0	0	0	0	19	59	21	6	0	0	0	0	0	105	41.0	37.7	
6:00 AM	1	0	1	3	53	154	76	8	0	1	0	0	0	297	41.0	37.4	
7:00 AM	0	2	0	5	88	247	84	14	0	0	0	0	4	444	41.0	37.3	
8:00 AM	1	1	2	10	99	202	73	10	0	0	0	0	2	400	40.0	36.5	
9:00 AM	0	0	1	17	93	165	66	5	2	0	0	0	1	350	40.0	36.4	
10:00 AM	0	0	0	7	66	167	64	6	2	0	0	0	1	313	40.0	37.0	
11:00 AM	0	0	1	7	113	200	63	4	0	0	1	0	2	391	40.0	36.5	
12:00 PM	2	1	0	9	112	193	61	5	0	0	0	0	0	383	40.0	36.1	
1:00 PM	1	3	1	25	118	217	53	7	2	0	0	0	4	431	40.0	36.1	
2:00 PM	2	0	4	19	133	208	66	5	2	0	0	0	1	440	40.0	35.9	
3:00 PM	0	2	1	17	147	222	50	8	0	1	0	0	0	448	39.0	35.7	
4:00 PM	1	2	4	24	176	213	35	10	0	0	0	0	1	466	39.0	35.0	
5:00 PM	2	1	9	26	184	162	29	1	0	0	0	0	0	414	38.0	34.1	
6:00 PM	0	0	2	10	146	182	43	2	1	2	0	0	0	388	39.0	35.5	
7:00 PM	0	0	3	10	89	111	38	4	1	0	0	0	0	256	40.0	35.7	
8:00 PM	0	0	0	4	50	98	34	1	0	0	0	0	1	188	40.0	36.7	
9:00 PM	0	0	0	11	33	89	23	3	3	0	0	0	0	162	40.0	36.7	
10:00 PM	0	0	0	1	16	34	18	2	1	0	0	0	0	72	41.0	37.5	
11:00 PM	0	1	0	0	8	11	17	3	1	0	0	0	0	41	42.0	38.2	
Total	10	13	29	206	1752	2969	935	107	17	4	1	0	17	6060	40.0	36.2	
Percent	0.17%	0.21%	0.48%	3.40%	28.91%	48.99%	15.43%	1.77%	0.28%	0.07%	0.02%	0.00%	0.28%				
AM Peak	6:00 AM	7:00 AM	8:00 AM	9:00 AM	11:00 AM	7:00 AM	7:00 AM	7:00 AM	4:00 AM	6:00 AM	11:00 AM		7:00 AM	7:00 AM			
Volume	1	2	2	17	113	247	84	14	2	1	1	0	4	444			
PM Peak	12:00 PM	1:00 PM	5:00 PM	5:00 PM	5:00 PM	3:00 PM	2:00 PM	4:00 PM	9:00 PM	6:00 PM			1:00 PM	4:00 PM			
Volume	2	3	9	26	184	222	66	10	3	2	0	0	4	466			
	15th Percentile: 32.0 MPH					Average Speed:		36.2 MPH			Posted Sp	eed Limit:	35 MPH				
	50th Percentile: 36.0 MPH							32 to 41 MPH		Number of Vehicles > 35 MPH					3415		
	85th Percentile: 36.0 MPH 85th Percentile: 40.0 MPH									56.4%							
95th Percentile: 42.0 MPH					Percent in	Pace:	Pace: 82.8%										

95th Percentile:

42.0 MPH

Percent in Pace:



PDI File #: 207709 ATR-A

Count Date Thursday, November 19, 2020

Speed (60-minute)

	Combined EB and WB															
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	5	11	7	1	0	0	0	0	0	24	42.0	37.7
1:00 AM	0	0	0	0	3	7	4	2	0	0	0	0	0	16	43.8	38.7
2:00 AM	0	0	1	1	2	6	3	3	0	0	0	0	0	16	44.5	37.3
3:00 AM	0	0	0	0	7	8	6	2	1	0	0	0	0	24	43.6	38.6
4:00 AM	0	0	0	1	4	23	28	10	4	0	0	0	0	70	45.7	40.8
5:00 AM	0	0	0	1	30	125	69	15	2	1	0	0	0	243	42.0	38.6
6:00 AM	1	1	1	7	100	290	149	14	2	1	0	0	0	566	41.0	37.5
7:00 AM	0	2	0	35	261	469	142	24	0	0	0	0	4	937	40.0	36.3
8:00 AM	1	1	4	34	227	478	127	13	0	0	0	0	2	887	40.0	36.1
9:00 AM	1	0	3	45	213	363	122	8	2	0	0	0	1	758	40.0	35.9
10:00 AM	0	0	3	30	170	397	109	9	2	0	0	0	1	721	40.0	36.2
11:00 AM	0	0	2	18	280	425	116	6	1	0	1	0	2	851	39.0	36.0
12:00 PM	2	1	1	35	268	411	123	10	0	0	0	0	0	851	40.0	35.7
1:00 PM	1	4	10	46	273	413	90	14	3	0	0	0	4	858	39.0	35.6
2:00 PM	2	0	9	54	373	456	115	6	2	0	0	0	1	1018	39.0	35.2
3:00 PM	0	2	4	45	385	521	114	13	0	1	0	1	0	1086	39.0	35.5
4:00 PM	1	4	7	63	434	452	67	12	0	0	0	0	1	1041	38.0	34.6
5:00 PM	2	1	9	71	438	387	59	7	1	0	0	0	0	975	38.0	34.2
6:00 PM	0	0	2	19	247	361	97	4	1	2	0	0	0	733	39.0	35.8
7:00 PM	0	0	4	20	161	234	87	9	2	0	0	0	0	517	40.0	36.0
8:00 PM	0	0	0	10	93	211	75	4	0	0	0	0	1	394	40.0	36.8
9:00 PM	0	0	0	12	63	133	45	6	4	0	0	0	0	263	41.0	36.8
10:00 PM	0	0	1	3	33	69	32	3	2	0	0	0	0	143	41.0	37.0
11:00 PM	0	1	0	0	14	29	33	4	2	1	0	0	0	84	42.6	38.5
Total	11	17	61	550	4084	6279	1819	199	31	6	1	1	17	13076	40.0	35.8
Percent	0.08%	0.13%	0.47%	4.21%	31.23%	48.02%	13.91%	1.52%	0.24%	0.05%	0.01%	0.01%	0.13%			
AM Peak	6:00 AM	7:00 AM	8:00 AM	9:00 AM	11:00 AM	8:00 AM	6:00 AM	7:00 AM	4:00 AM	5:00 AM	11:00 AM		7:00 AM	7:00 AM		
Volume	1	2	4	45	280	478	149	24	4	1	1	0	4	937		
PM Peak	12:00 PM	1:00 PM	1:00 PM	5:00 PM	5:00 PM	3:00 PM	12:00 PM	1:00 PM	9:00 PM	6:00 PM		3:00 PM	1:00 PM	3:00 PM		
Volume	2	4	10	71	438	521	123	14	4	2	0	1	4	1086		
	15th Percentile: 32.0 MPH				Average S	peed:	35.8	MPH		Posted Sp	eed Limit:		35	35 MPH		
	50th Percentile: 36.0 MPH				10 MPH Pace: 31 to 40 MPH				Number of Vehicles > 35 MPH:					6945		
	85th Percentile: 40.0 MPH		MPH	Number in Pace:			10698	10698 Percent of Vehicles > 35 MPH:				l:	53.1%			

81.8%

